

REMARKS

In response to the above-identified Office Action, Applicant amends the claims and traverses the Examiner's rejection to the claims and seeks reconsideration thereof. Claims 1-2 are now pending in the present application. In this response, claim 1 has been amended, no claim has been added and no claims have been cancelled.

Claim Amendment

Applicant respectfully requests the Examiner enter the amendment to Claim 1 and submits no new matter has been added. Applicant respectfully submits the element of a "projectile-like dummy portion" included in amended Claim 1 is disclosed in Figs. A-D of the present application.

Claims Rejected under 35 U.S.C. §103(a)

In the outstanding Office Action, Claims 1 and 2 were rejected under 35 U.S.C. 103(a) as being unpatentable over Shima et. al. (U.S. Patent No. 4,946,802) in view of Bridges et. al. (U.S. Patent No. 4,764,246).

The present invention claims a method of fabricating an optical semiconductor device by forming a plurality of optical semiconductor elements on a semiconductor substrate, a projection-like dummy portion in a center of a square at four corners of which said optical semiconductor elements are arranged and a buried layer by vapor phase epitaxy so as to bury a portion between said optical semiconductor elements and

said dummy portion.

To render a claim obvious, the relied upon references must disclose every limitation of the claim such that the invention as a whole would have been obvious at the time the invention was made to one skilled in the art. MPEP §2143. Furthermore, there must be a showing of suggestion or motivation to modify or combine the teachings of those references. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Hindsight must be avoided and instead a conclusion of obviousness must be based on the facts found in the prior art. *In re McLaughlin*, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

In determining Applicant's claimed invention is obvious over the cited references, the Examiner determines Shima disclose forming a plurality of optical semiconductor elements on a semiconductor substrate, forming a dummy portion in a center of a square at four corners of which the optical semiconductor elements are arranged and forming a buried layer by epitaxy so as to bury a portion between the optical semiconductor elements and the dummy portion. The Examiner recognizes, however, that Shima fails to teach or suggest the use of Applicant's claimed vapor phase epitaxy and relies upon Bridges to cure the short comings of Shima, determining that Bridges teaches that either the liquid or halide vapor phase epitaxy process may be used to form the layers because they are process equivalents. The Examiner determines that at the time of the invention, it would have been obvious to one of ordinary skill in

the art to substitute the halide vapor phase epitaxy for the liquid phase epitaxy of Shima because the processes are art recognized equivalents for accomplishing the same purpose.

Applicant respectfully disagrees with the Examiner and submits Claim 1 is not obvious over the cited references because the references do not teach or suggest all the elements recited in amended Claim 1. In particular, Shima and Bridges, alone or in combination, fail to teach or suggest a method of fabricating an optical semiconductor device, including at least the elements of forming a plurality of optical semiconductor elements on a semiconductor substrate, a projection-like dummy portion in a center of a square at four corners of which said optical semiconductor elements are arranged and a buried layer by vapor phase epitaxy so as to bury a portion between said optical semiconductor elements and said dummy portion. It is the feature of Shima to form the depression and to make the thickness of the active layer formed on said depression thicker than the thickness of the other portions (See Col. 3, lines 33-35, lines 40-44), the layer is not formed flat like the present invention. On the other hand, it is the feature of the present invention to form a projection-like dummy portion and to make the buried layer become flat. Accordingly, the difference in the functional effect is made by the difference between the depression and the projection. Thus, the references alone or in combination do not suggest all the elements of Claim 1.

Moreover, the Examiner has not shown the requisite motivation or suggestion to combine the references to arrive at Applicant's claimed invention. The Examiner merely states Shima and Bridges teach equivalent processes therefore it would have been obvious to one of ordinary skill in the art to substitute the halide vapor phase epitaxy taught by Bridges for the liquid phase epitaxy of Shima. It is well settled that the mere fact that the modification would have been within the ordinary skill in the art without some objective reason to modify the references is not sufficient to establish a *prima facie* case of obviousness. *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000). The Examiner has not provided an objective reason for the relied upon combination. In fact, as recognized by the Examiner, the references teach equivalent processes therefore one skilled in the art having knowledge of this fact would realize no advantage to substituting the liquid phase epitaxy taught by Shima with a halide vapor phase epitaxy taught by Bridges. Accordingly, upon viewing the teachings of the cited references one skilled in the art would find no motivation to combine the references to arrive at Applicant's claimed invention. Although, such a combination may have been "obvious to try", such reasoning is also not sufficient to establish a *prima facie* case of obviousness.

Accordingly, Applicant respectfully submits Claim 1 is not obvious over Shima in view of Bridges for the foregoing reasons and respectfully requests the Examiner's rejection be withdrawn. Furthermore, Claim 2 depends from Claim 1 and incorporates the limitations thereof therefore Claim 2 is also in condition for allowance.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

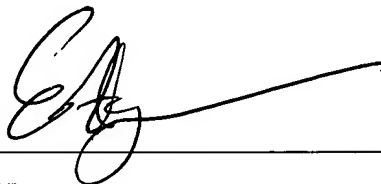
Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

Dated: _____

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By: _____



Eric S. Hyman
Reg. No. 30,139

12400 Wilshire Boulevard
Seventh Floor
Los Angeles, California 90025
(310) 207-3800

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on 1/14/05.

Kumiko Alexander

1/14/05